

NON-PUBLIC?: N
ACCESSION #: 8906020268
LICENSEE EVENT REPORT (LER)

FACILITY NAME: Nine Mile Point Unit 2 PAGE: 1 of 4

DOCKET NUMBER: 05000410

TITLE: Reactor Scram as a Result of a Neutron Monitoring System Trip
EVENT DATE: 04/22/89 LER #: 89-009-00 REPORT DATE: 05/22/89

OPERATING MODE: 1 POWER LEVEL: 100

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR
SECTION
50.73(a)(2)(iv)

LICENSEE CONTACT FOR THIS LER:
NAME: Robert G. Smith, Operations
Superintendent Unit 2 TELEPHONE: (315)349-2388

COMPONENT FAILURE DESCRIPTION:
CAUSE: SYSTEM: COMPONENT: MANUFACTURER:
REPORTABLE TO NPRDS:

SUPPLEMENTAL REPORT EXPECTED: No

ABSTRACT:

On April 22, 1989 at 1941 hours, Nine Mile Point Unit 2 (NMP2) experienced a reactor scram as a result of a neutron monitoring system trip.

Specifically, when preparing to perform weekly Turbine Backup Overspeed Trip Testing an operator keyed a radio within the vicinity of the Electro Hydraulic Control (EHC) cabinet. This action caused EHC system disturbances resulting in inadvertent movements of the Turbine Control and Bypass valves. This malfunction created a pressure spike which caused all six Average Power Range Monitors (APRMs) to exceed their upscale trip setpoint.

At the time of the event Reactor Power was at 100% rated thermal power.

The root cause for this event was Human Performance Problems.

Corrective actions taken for this event were: (1) Issuance of a Training Modification Request to ensure appropriate personnel are aware of potential problems with radio use; (2) Installation of permanent Caution signs at each

entrance to the Relay Room; and (3) Issuance of a memorandum from the Station Superintendent to all station personnel concerning use of radios/beepers. In addition, other areas of the station which have been identified as radio transmission sensitive have been posted.

END OF ABSTRACT

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I. DESCRIPTION OF THE EVENT

On April 22, 1989 at 1941 hours with plant operation at 100%, Nine Mile Point Unit 2 (NMP2) experienced a reactor scram as a result of a neutron monitoring system trip. Specifically, when making preparations to perform weekly "Backup overspeed trip testing" of the turbine, (using an Operations Department Procedure N2-OP-21, section F.3.0) an operator keyed a radio in close proximity to the Electro-Hydraulic Control (EHC) cabinet. The Radio Frequency (RF) signals from the radio caused disturbances in the EHC system resulting in inadvertent movements of the turbine control and bypass valves. These movements caused a Reactor Pressure Vessel (RPV) pressure spike which caused all six Average Power Range Monitors (APRMs) to exceed their upscale trip setpoint. Flux peaked at approximately 120% with a peak Reactor pressure of 1024 pounds per square inch gauge (psig).

Operators took prompt action to stabilize plant conditions and establish plant cooldown. Cold shutdown conditions were achieved approximately thirteen hours later at 0940 on April 23, 1989.

No structures, components, or systems that were inoperable at the start of the event contributed to the event.

Between April 22 and April 23, Niagara Mohawk Power Corporation (NMPC) Instrument and Control, and Engineering Department conducted troubleshooting of the EHC control circuitry to ensure no additional problems existed. Backup overspeed trip test circuitry and speed control low value gates were tested. Field junction box wiring for speed sensors were also inspected. No problems were found. Two types of two-way radios were keyed on all frequencies in the vicinity of the panel to verify response. The output of control circuitry low value gates (control signal to valve sensors) shifted from .3 to .5 volts on all frequencies.

II. CAUSE OF THE EVENT

A root cause analysis was performed using Site Supervisory Procedure S-SUP-1, "Root Cause Evaluation Program". The root cause for this event was Human Performance Problems, where a NMPC licensed operator keyed a hand-held radio

in a RF sensitive area. The root cause review identified two areas which contributed to the Human Performance Problems:

1. Work-Place Deficiencies - NMPC licensed operator failed to recognize posted warnings. Although this potential problem had been previously identified and warning signs installed, their placement and size were inadequate to alert the individual involved in the event.

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II. CAUSE OF THE EVENT (Cont'd)

2. Lack of knowledge or training - as a contributing factor, no training could be recalled by the individual involved and no cognition of the potential problem existed.

The event was initiated by a NMPC licensed operator while making preparation to perform routine scheduled testing. The initiating activity (use of a radio in RF sensitive area) was not addressed by an approved procedure. No unusual characteristics of the work location contributed to the event.

III. ANALYSIS OF THE EVENT

This event is reportable in accordance with 10CFR50.73(a)(2)(iv) which requires the licensee to report "Any event or condition that resulted in manual or automatic actuation of any Engineered Safety Feature (ESF), including the Reactor Protection System (RPS)."

There were no adverse safety consequences as a result of this event. The response of the plant during this event was bound by the Generator Load Rejection Event which is analyzed in Chapter 15 of the Final Safety Analysis Reports (FSAR).

IV. CORRECTIVE ACTIONS

1. A Training Modification Recommendation (TMR) was submitted to ensure appropriate personnel will be aware of the potential problems with radio use.
2. Permanent signs have been installed at each entrance to the Relay Room.
3. Other radio sensitive equipment in the station has been identified and posted as such.

4. A memorandum from the Station Superintendent was issued to all station personnel to provide directives for use of radios/beepers.

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V. ADDITIONAL INFORMATION

A. Identification of Components:

IEEE 803 IEEE 805
Components EHS Function System ID

Electro Hydraulic Control NA JI
Turbine Control and Bypass Valve PCV JI
Average Power Range Monitors NA IG
Overspeed Trip Test Logic NA JI

B. Failed Components:

None

C. Previous Similar Events

There have been no previous similar events where a reactor scram was caused by RF transmissions.

ATTACHMENT 1 TO 8906020268 PAGE 1 OF 1

NIAGARA
MOHAWK

NINE MILE POINT NUCLEAR STATION /P.O. BOX 32 LYCOMING, NEW YORK
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/TELEPHONE (315) 343-2110

May 22, 1989

United States Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

RE: Docket No. 50-410
LER 89-09

Gentlemen:

In accordance with 10CFR50.73, we hereby submit the following Licensee Event Report:

LER 89-09 Is being submitted in accordance with 10CFR50.73(a)(2)(iv), "Any event or condition that resulted in manual or automatic actuation of any Engineered Safety Feature (ESF), including the Reactor Protection System (RPS)."

This report was completed in the format designated in NUREG 1022, Supplement 2, dated September 22, 1988.

Very truly yours,

J. L. Willis
General Superintendent
Nuclear Generation

JLW/GHM/mjv
(0494V)

Attachment

cc: Regional Administrator, Region 1
Sr. Resident Inspector, W. A. Cook
PPF

*** END OF DOCUMENT ***
